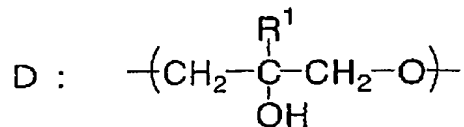
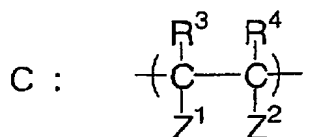
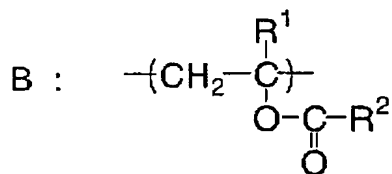
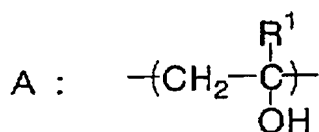


WHAT IS CLAIMED IS:

1. An ink-jet recording ink, comprising a pigment and a compound represented by the following General formula (I):



wherein in General formula (I), R represents a hydrophobic group, or a group derived from a hydrophobic polymer; X represents a bivalent linking group having a hetero bond; n is an integer from 10 to 3500; and structural units of repeated Y comprise at least one structural unit represented by A, C or D, and further comprise 0 to 40% by mole of structural units represented by B:



wherein in structural units A through D, R<sup>1</sup> represents a hydrogen atom or an alkyl group having 1 to 6 carbon atoms; R<sup>2</sup> represents a hydrogen atom or an alkyl group having 1 to 10 carbon atoms; R<sup>3</sup> represents a hydrogen atom or a methyl group; R<sup>4</sup> represents a hydrogen atom, -CH<sub>3</sub>, -CH<sub>2</sub>COOH or an ammonium salt thereof or alkali metal salt thereof, or -CN; Z<sup>1</sup> represents a hydrogen atom, -COOH or an ammonium salt thereof or alkali metal salt thereof, or -CONH<sub>2</sub>; and Z<sup>2</sup> represents -COOH or an ammonium salt thereof or alkali metal salt thereof, -SO<sub>3</sub>H or an ammonium salt thereof or alkali metal salt thereof, -OSO<sub>3</sub>H or an ammonium salt thereof or alkali metal salt thereof, -CH<sub>2</sub>SO<sub>3</sub>H or an ammonium salt thereof or alkali metal salt thereof, -CONHC(CH<sub>3</sub>)<sub>2</sub>CH<sub>2</sub>SO<sub>3</sub>H or an ammonium salt thereof or alkali metal salt thereof, or -CONHCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>N<sup>+</sup>(CH<sub>3</sub>)<sub>3</sub>Cl<sup>-</sup>.

2. An ink-jet recording ink according to claim 1, wherein the hydrophobic group represented by R in General formula (I) is an aliphatic group or an aromatic group.

3. An ink-jet recording ink according to claim 2, wherein the hydrophobic group represented by R in General formula (I) is an alicyclic group.

4. An ink-jet recording ink according to claim 2, wherein the hydrophobic group represented by R in General formula (I) is selected from the group consisting of alkyl, alkenyl, alkynyl, phenyl and naphthyl

groups.

5. An ink-jet recording ink according to claim 4, wherein the hydrophobic group represented by R in General formula (I) is an alkyl group having 3 to 70 carbon atoms.

6. An ink-jet recording ink according to claim 1, wherein R in General formula (I) is a group derived from at least one hydrophobic polymer selected from the group consisting of polystyrene, polymethacrylic acid ester, polyacrylic acid ester, polyvinyl chloride, and derivatives thereof.

7. An ink-jet recording ink according to claim 5, wherein a polymerization degree of R in the General formula (I) is from 2 to 500.

8. An ink-jet recording ink according to claim 1, wherein the hetero bond in X in the General formula (I) is selected from the group consisting of an ether bond, an ester bond, a thioether bond, a thioester bond, a sulfonyl bond, an amide bond, an imide bond, a sulfonamide bond, a urethane bond, a urea bond, and a thiourea bond.

9. An ink-jet recording ink according to claim 1, wherein the structural unit A is a structural unit derived from vinyl alcohol,  $\alpha$ -methylvinyl alcohol, or  $\alpha$ -propylvinyl alcohol.

10. An ink-jet recording ink according to claim 1, wherein the structural unit B is a structural unit derived from vinyl acetate, vinyl formate, vinyl propionate, or an  $\alpha$ -substitution product thereof.

11. An ink-jet recording ink according to claim 1, wherein the structural unit C is a structural unit derived from acrylic acid, methacrylic acid, itaconic acid, maleic acid, an ammonium salt thereof or a metal salt thereof.

12. An ink-jet recording ink according to claim 1, wherein the structural unit D is selected from the group consisting of –  
 $\text{CH}_2\text{CH}(\text{OH})\text{CH}_2\text{O}-$ ,  $-\text{CH}_2\text{C}(\text{CH}_3)(\text{OH})\text{CH}_2\text{O}-$ , and  $-\text{CH}_2\text{C}(\text{C}_2\text{H}_5)(\text{OH})\text{CH}_2\text{O}-$ .

13. An ink-jet recording ink according to claim 1, wherein a mass ratio of R to  $(\text{Y})_n$  in General formula (I) is from 0.01 to 2, the mass ratio being calculated using atomic weights of respective atoms in R and  $(\text{Y})_n$ .

14. An ink-jet recording ink according to claim 1, wherein  $(\text{Y})_n$  in General formula (I) comprises, as a structural unit thereof, ethylene, propylene, isobutene, acrylonitrile, acrylamide, methacrylamide, N-vinylpyrrolidone, vinyl chloride or vinyl fluoride.

15. An ink-jet recording ink according to claim 1, further comprising water.

16. An ink-jet recording ink according to claim 1, further comprising an water-soluble organic solvent.

17. An ink-jet recording ink according to claim 1, further comprising a dispersing agent.

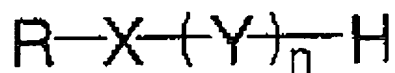
18. An ink-jet recording ink according to claim 1, further comprising a drying inhibitor.

19. An ink-jet recording ink according to claim 1, further comprising a penetration promoter.

20. An ink-jet recording ink according to claim 1, further comprising a high-boiling water-soluble solvent and a surface tension adjuster.

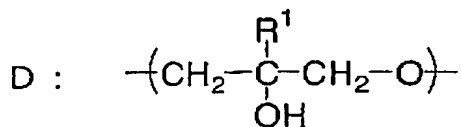
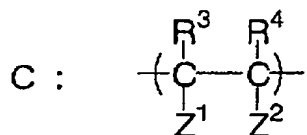
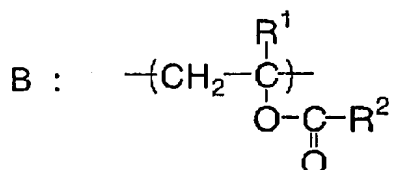
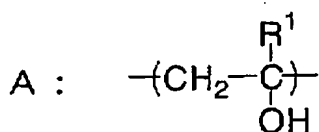
21. An ink-jet recording ink according to claim 1, which has a surface tension of 20 to 60 mN/m.

22. An image forming method, using an ink-jet recording ink comprising a pigment and a compound represented by the following General formula (I) to form an image:



General formula (I)

wherein in General formula (I), R represents a hydrophobic group, or a group derived from a hydrophobic polymer; X represents a bivalent linking group having a hetero bond; n is an integer from 10 to 3500; and structural units of repeated Y comprise at least one structural unit represented by A, C or D, and further comprise 0 to 40% by mole of structural units represented by B:



wherein in structural units A through D, R<sup>1</sup> represents a hydrogen atom or an alkyl group having 1 to 6 carbon atoms; R<sup>2</sup> represents a hydrogen atom or an alkyl group having 1 to 10 carbon atoms; R<sup>3</sup> represents a hydrogen atom or a methyl group; R<sup>4</sup> represents a hydrogen atom, -CH<sub>3</sub>, -CH<sub>2</sub>COOH or an ammonium salt thereof or alkali metal salt thereof, or -CN; Z<sup>1</sup> represents a hydrogen atom, -COOH or an ammonium

salt thereof or alkali metal salt thereof, or  $-\text{CONH}_2$ ; and  $Z^2$  represents  $-\text{COOH}$  or an ammonium salt thereof or alkali metal salt thereof,  $-\text{SO}_3\text{H}$  or an ammonium salt thereof or alkali metal salt thereof,  $-\text{OSO}_3\text{H}$  or an ammonium salt thereof or alkali metal salt thereof,  $-\text{CH}_2\text{SO}_3\text{H}$  or an ammonium salt thereof or alkali metal salt thereof,  $-\text{CONHC}(\text{CH}_3)_2\text{CH}_2\text{SO}_3\text{H}$  or an ammonium salt thereof or alkali metal salt thereof, or  $-\text{CONHCH}_2\text{CH}_2\text{CH}_2\text{N}^+(\text{CH}_3)_3\text{Cl}^-$ .

23. An image forming method according to claim 22, wherein the hydrophobic group represented by R in General formula (I) is an aliphatic group or an aromatic group.